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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of		
 Inquiry Concerning High-speed Access to the)	GN Docket No. 00-185
Internet Over Cable and Other Facilities)	
)	
Appropriate Regulatory Treatment for		CS Docket No. 02-52
Broadband Access to the Internet Over		
Cable Facilities)	

**EXECUTIVE SUMMARY & TABLE OF CONTENTS OF
THE REPLY COMMENTS OF THE ALLIANCE OF LOCAL
ORGANIZATIONS AGAINST PREEMPTION**

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SUMMARY

The industry's comments in this proceeding are an extended exercise in contradiction. A large and influential industry that has achieved enormous success under a regulatory regime that expressly relies on the exercise of local authority now claims that maintaining that regime with respect to cable modem service would be unreasonable and unlawful. At the same time, the industry rejects any suggestion that it should be regulated in the same fashion as its competitors. There is no basis in fact or law for the rejection of local franchising authority over cable modem services, and the Commission is bound by the Constitution and the Communications Act to uphold that authority.

The industry's comments also obscure a fundamental point: this proceeding is not just about the regulation of cable modem service. There are three principal elements in the relationship between local governments and service providers. First, local governments have the right and responsibility to preserve public property by imposing conditions on the use of the public rights-of-way. Second, local governments have the right and responsibility to protect the public fisc by obtaining compensation or rent for the use of the public rights-of-way. And third, they have the right and responsibility to regulate a business service, as reasonably necessary to protect the interests of their residents who subscribe to the service. The Commission's authority to alter local rights depends on the nature and source of those rights.

The Commission's Authority To Preempt Is Limited.

As a threshold matter, to justify any effort to preempt local authority, the Commission must be able to show that preemption will advance federal policy goals. By the Commission's own admission, deployment of cable modem service is well advanced. Even the industry

commenters acknowledge this. The fundamental issue is not deployment, but demand for the service.

Furthermore, the Communications Act offers no authority for preemption, and actually affirms local authority regarding cable modem service. The industry commenters argue that the source of local franchising authority over cable modem service is derived from and limited by Title VI of the Communications Act. But this is not true. In reviewing the closely analogous case of the Commission's Open Video System rules, the Fifth Circuit ruled that the Commission could not preclude local franchising of OVS operators, because while the Cable Act "may have expressly *recognized* the power of localities to impose franchise requirements, it did not *create* that power. . . ." *City of Dallas v. FCC*, 165 F.3d 341, 348 (5th Cir. 1999) (emphasis in original). None of the commenters even attempts to address the effects of this holding. Nor do the commenters address the effect of Section 601 of the Telecommunications Act of 1996, which precludes any argument that the Communications Act allows any preemption of local authority without an express statement of Congressional intent.

The provisions that commenters do cite to support preemption are insufficient to overcome Section 601 or the reasoning of the Dallas decision. For example:

- Section 706 of the 1997 Act contains no express mandate for preemption. Furthermore, in its implementation of Section 706 the Commission has repeatedly found that cable modem service is flourishing.
- Section 230 of the Communications Act likewise contains no preemptive mandate. It deals only with the screening of offensive material on the Internet.
- Section 253 expressly preserves local authority over the use of the public rights-of-way by telecommunications providers. It does not apply to local authority regarding cable modem service in any way, even by implication.
- The Commission's authority under Title I of the Communications Act is insufficient to justify preemption, because Title I only allows the Commission to exercise authority ancillary to its other powers. The Commission's powers over information

services themselves being quite limited, the Commission's ancillary authority is insufficient to preempt local authority.

- Similarly, the mere classification of cable modem service as an interstate information service is insufficient to preclude all local authority. The classification does not, for example, affect local property rights, and the Commission has no inherent power to take local property.
- The “dormant Commerce Clause” doctrine does not apply, because the Communications Act itself is an exercise of the commerce power.
- Nor does the First Amendment authorize preemption. Franchising and compensation requirements are not restrictions on speech, and the First Amendment does not authorize the taking of property.

Local Governments Have the Authority to Charge Cable Modem Franchise Fees.

Leaving aside the Commission's lack of authority to preempt, there is no justification for any attempt to preempt local authority to obtain compensation for the use of the public rights-of-way. Industry commenters assert that franchise fees are inappropriate because their systems do not impose any additional burden on the public rights-of-way. This argument is wrong for two reasons. First, fundamental economic principles require that users of property pay fair market value for that use. If cable modem service providers are allowed to use public property to extract value, but are not required to pay rent related to that value, the result will be distortions in the market and misallocation of right-of-way resources. Second, from an engineering perspective, there are real differences between a cable system designed to provide cable modem service, and a system that is designed to deliver only video services. And systems capable of delivering cable modem service impose a different and greater burden on the public rights-of-way.

Nor does it make any sense to argue that fees should be banned because they may be “revenue producers.” Rental fees “produce revenue” in excess of costs every day. Furthermore, the industry commenters present no actual evidence that the fees they pay exceed local

government costs. Local governments expend enormous sums on acquiring, improving and maintaining the public rights-of-way every year.

Section 622 of the Cable Act does not forbid franchise fees on cable modem service providers or their revenues. In fact, Section 622(g) expressly allows local governments to adopt fees other than cable franchise fees.

Furthermore, the Commission's classification alone should not be enough to affect the issue of compensation. Operators should not be permitted to pay less for the use of property than they willingly contracted because the Commission changes the nomenclature. This is an arbitrary and unjust result.

Local Governments Have the Authority To Enact Franchising Requirements for Cable Modem Service Providers.

Service providers rely primarily on two provisions to argue against franchise requirements, Section 621(a)(2) and Section 624. Neither applies. The purpose of Section 621(a)(2) is merely to state that a cable franchise permits access to the public rights-of-way and to certain private easements. It is not a definition of what services a franchisee may offer. Section 624 limits the authority of a local government to regulate the services, facilities and equipment of a cable operator – but if cable modem service is not a cable service, then Section 624 does not apply.

Industry commenters also say that additional franchises are not needed, because a cable franchise provides all the protection a local government requires. But this is not an argument in favor of preemption: how can a local government rely on a cable franchise to deal with cable modem issues if its authority over cable modem service has been preempted? As soon as the Commission preempts, the application of the cable franchise to cable modem service presumably ends. Furthermore, local governments do potentially have different interests or concerns, and

there are actual design and construction differences between the two types of systems, so there is in fact no duplication.

Local Regulations Governing Customer Service and Privacy Must Be Respected.

The Commission's central mission is protection of consumers from market abuses by providers not subject to effective competition. Local governments share this mission. This docket must not result in consumers losing effective recourse against irresponsible or unresponsive cable modem service providers.

Section 632 currently allows local governments to regulate customer service, without reference to the type of service. And Section 631 expressly allows regulation of privacy in connection with "other services." Consequently, there can be no preemption regarding these issues unless local regulation conflicts with federal law. Furthermore, because cable modem service dominates the broadband market, preemption of local requirements would leave consumers unprotected.

Finally, the Commission must leave the question of repayment of past franchise fees to state and local law, because state and local law adequately addresses the subject and because Title I does not grant the Commission authority over cable modem franchise fees.

The Commission has decided that cable service and cable modem service are mutually exclusive, and that decision has consequences. Now the only way to preserve and protect local authority in the wake of the Declaratory Ruling is to recognize that cable modem service has no special privileges and is subject to the same local laws and regulations as other businesses seeking privileged use of the public rights-of-way.

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SUMMARY OF CTC REPORT & SUPPLEMENTAL REPORT
Attached as Exhibit G, ALOAP Comments & Exhibit D, ALOAP Reply, CS Docket No. 02-52

Andrew Afflerbach, Ph.D., P.E., and David Randolph, P.E. are principal engineers at Columbia Telecommunications Corporation, an engineering firm that specializes in advising local governments in cable television and other communications-related matters. The firm is a leading expert in the design of institutional networks and cable television technology generally.

Dr. Afflerbach and Mr. Randolph prepared, “The Impact of Cable Modem Service on the Public Right-of-way,” June 2002 (the “CTC Report”), attached as Exhibit G to the ALOAP Comments, for the purpose of illustrating the differences in network architecture between a cable service-only system and a system designed and built to provide cable modem services as well as video services. Dr. Afflerbach and Mr. Randolph reviewed the industry’s assertions regarding right-of-way burdens as presented in the initial comment round to prepare a supplemental report (“CTC Supplemental Report”), attached as Exhibit D to the ALOAP Reply Comments.

The CTC Report concludes that “cable modem service burdens the public right-of-way significantly more than does video-only cable service, because modem service requires a far more elaborate cable system than does video.” Among other things: upgrading cable systems to provide cable modem service often requires installation of additional and significantly larger power supplies and electronic equipment cabinets. In addition, in order to provide adequate upstream capacity for non-cable services, the operator will typically install more nodes, and more fiber.

The CTC Report concludes that cable modem systems are different from cable-only systems, impose greater burdens on local governments and make more extensive use of public property. Beginning in the 1990’s and continuing today, cable operators have engaged in extensive construction in the public rights-of-way as they have upgraded their systems so they could provide cable modem services. The CTC Report notes that none of this extensive construction would be necessary simply to provide video-only services.

In preparing the CTC Supplemental Report, the authors reviewed the industry’s assertions regarding right-of-way burdens. The CTC Supplemental Report points out that in addition to the burdens arising out of differences in engineering design pointed out in their initial

report, cable modem service imposes another, very extensive additional burden on the rights-of-way: the need to install conduit to protect fiber optic cable. The coaxial cable used in traditional cable systems can be buried directly in the ground – but operators must replace much of that coaxial cable with fiber optic cable when they upgrade their systems to provide cable modem service. Thus, there continue to be very basic and significant differences between the burdens imposed by the construction of a video-only coaxial cable system, and a fiber optic cable system capable of providing cable modem and broadband service.

Finally, the two CTC reports deal only with the current practices in the industry. They do not speculate about possible future needs or changes in practices. If current systems prove inadequate, or if greater demand for cable modem service does develop in the future, the replacement facilities will place additional burden on the rights-of-way. For example, if the long-sought “killer app” ever arrives, upstream bandwidth needs could increase sharply, requiring the construction of additional nodes and hubs and even additional small headends.’ This would not be the case with a video-only system. Finally, cable operators traditionally viewed their service as only a residential service, and often do not extend their networks deep into business districts. But small businesses have become a growing market for cable modem service – and this requires extending networks into parts of communities that often were not served by traditional video networks.²

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¹ Cable operators have anticipated this problem to some degree, by designing and building “scalable” networks that allow for relatively easy expansion of bandwidth. But if this is not done, new nodes and other equipment may be required in the rights-of-way. *See, e.g.* E. Schweiter, J. Tinol, J. Dobleugust, “Scalable Architectures that Break the Bandwidth Barrier for Digital Services,” Proceedings Manual, Cable TEC Expo (June 98), at 235-36. And even a scalable network will have bandwidth limits which may be exceeded if demand reaches unanticipated levels.

² J. Yatsko, “Unlocking the Full Potential of HFC Networks with Integrated IP Broadband Services,” Proceedings Manual, Cable TEC Expo 2001 (May 2001), at 179. “Small and Medium business (5 to 100 employees) will represent a significant market opportunity for broadband service providers ... [C]able is well positioned to serve this segment with a wide array of new services Current and future Internet Applications and Services will continue to stress the probabilities of today’s broadband networking.” *Id.* at 179-80.

TAB C1

The Impact of Cable Modem Service on the Public Right of Way

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APPENDIX A Comments of Alliance of Local Organizations Against Preemption

I. Executive Summary

Cable modem service burdens the public rights of way (ROW) significantly more than does video-only cable service, because modem service requires a far more elaborate cable system than does video.¹

This Report evaluates the different types of systems necessary to support video-only service, as opposed to cable modem service. The Report concludes that cable modem service necessitates construction that burdens the ROW more than does video-only service because of construction of (1) far more cable to existing and new plant areas; and (2) more and larger equipment and equipment containers, such as power supplies, cabinets, and vaults, with associated impact on aesthetics, noise, and public safety.

Cable companies did not undertake the last round of upgrades² in the late 1990s and early 2000s to offer video services. Indeed, most cable systems, as they existed in the early and mid-1990s, needed relatively little new cable construction to offer the analog and digital video-only services available today.

Rather, cable companies undertook the major upgrades of recent years to offer advanced services over cable modems. Recent upgrades have focused on expanding bandwidth and reliability to residential areas and on building virgin plant to business areas and buildings. These upgrades and new construction have had enormous impact on the public ROW:

- With respect to residential customers, they have entailed the construction of fiber optic cable and large equipment and facilities far “deeper” into the cable systems than was ever done, or necessary, for video-only services.
- With respect to business customers, new construction is often in areas where cable companies have never before built plant.

Both trends are likely to continue as cable operators further upgrade their plant to offer more sophisticated, advanced two-way services. In particular, new construction to commercial areas will likely increase dramatically in coming years as the cable industry attempts to grow beyond its traditional residence-only customer base. These upgrades placed, and continue to place, greater burdens on the public ROW. Similarly, future upgrades in the ROW will be for purposes of offering advanced services, not primarily to offer the video-only services that were adequately supported by most systems before the last round of upgrades.

¹ This Report refers frequently to “video-only” or “video” cable services. These terms are meant to refer to both analog and digital cable services, including traditional broadcast, pay-per-view, **and** multiple-channel programming (such as sports events with choice of camera angle or audio).

² This Report uses the term “upgrade” to refer to the cable construction of the late 1990s and early 2000s, much of which is still ongoing. The same analysis applies to “overbuild” cable systems built by **new** competitors, **as well** as to “rebuilt” of existing systems.

11. Cable Modem Service Necessitates More Cable Construction in the ROW

One of the most intrusive aspects of a cable system upgrade is the construction of the cable in the public ROW. Modem cable construction involves placing fiber optic and coaxial cable on utility poles or underground. An upgrade of an existing cable system requires placement of new fiber optic cable and coaxial cable to replace old or damaged cable and to serve new areas and customers.

The objectives of the cable upgrades of the late 1990s and early 2000s were 1) to make the cable systems capable of two-way operation, 2) to increase system capacity for advanced two-way services, and 3) to increase system reliability for advanced two-way services. At the core of an effective rebuild is construction of fiber optic cable. Fiber optics provides a logical choice for an advanced two-way communications platform because of its nearly limitless capacity, its reliability, and its lack of susceptibility to interference from outside signals.

Such construction is far more extensive and time-consuming than if the system were designed to offer video-only services. Rather, the construction requirements are primarily driven by the interest in rolling out advanced two-way services such as Voice over IP or other forms of telephony. This additional construction burdens the public ROW in the following ways, among others:

2.1 Rebuilding of Cable in Residential Areas

2.1.1 Segmentation Necessary for Advanced Two-way Services

Constructing fiber optics is costly, so most communications companies limited their recent fiber deployment to a backbone and connectivity to individual neighborhoods, and tried to continue using their existing coaxial cable for the last mile to the home. This architecture is known as hybrid fiber-coax (HFC). Its great benefit is that the fiber from the headend to the neighborhoods segmented the system into discrete pieces. For example, a community of 60,000 residences could be broken into 60 “node service areas” of 1,000 residences.

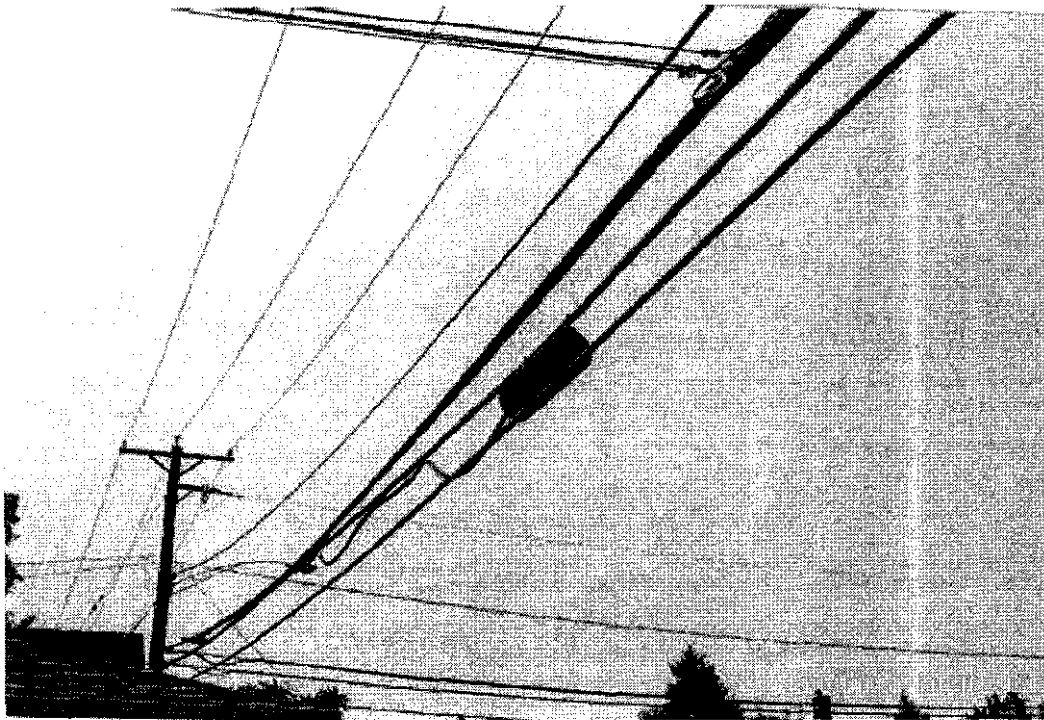
With the system broken into node service areas, the cable operator is in a workable position to offer two-way services. Current interactive video services such as pay-per-view place only limited demands per subscriber on upstream capacity. Large node sizes could accommodate these functions. But advanced two-way services place significant and growing demands on upstream capacity. In order to provide the necessary bandwidth upstream, nodes must be placed ever closer to the subscriber to provide smaller node service areas and, as a result, more upstream capacity per subscriber. With respect to capacity, cable modem technology works in a similar manner to a shared party line or office local area network, where the users share the bandwidth.

The “noise” on a cable system leaking from residences and generated by system amplifiers is funneled from all parts of the system to the headend on the upstream channels, the portion of the cable system transmitting from the users to the network. The connection of 60,000 subscribers on a single segment would create so much noise on the system that it would be impossible to operate advanced two-way services, although this would not impact video-only service, which makes limited (in the case of interactive set-top converters) or no use of the upstream capacity. However, small segments would generally not create too much noise for advanced services. In our experience, some operators are building to nodes of 450 or less primarily to accommodate expected demand for cable modem services that potentially include Voice over IP. The upgrade of Adelphia systems in Los Angeles and the Greater Los Angeles area, for example, has resulted in nodes of approximately 150 homes.

2.1.2 Aerial Construction

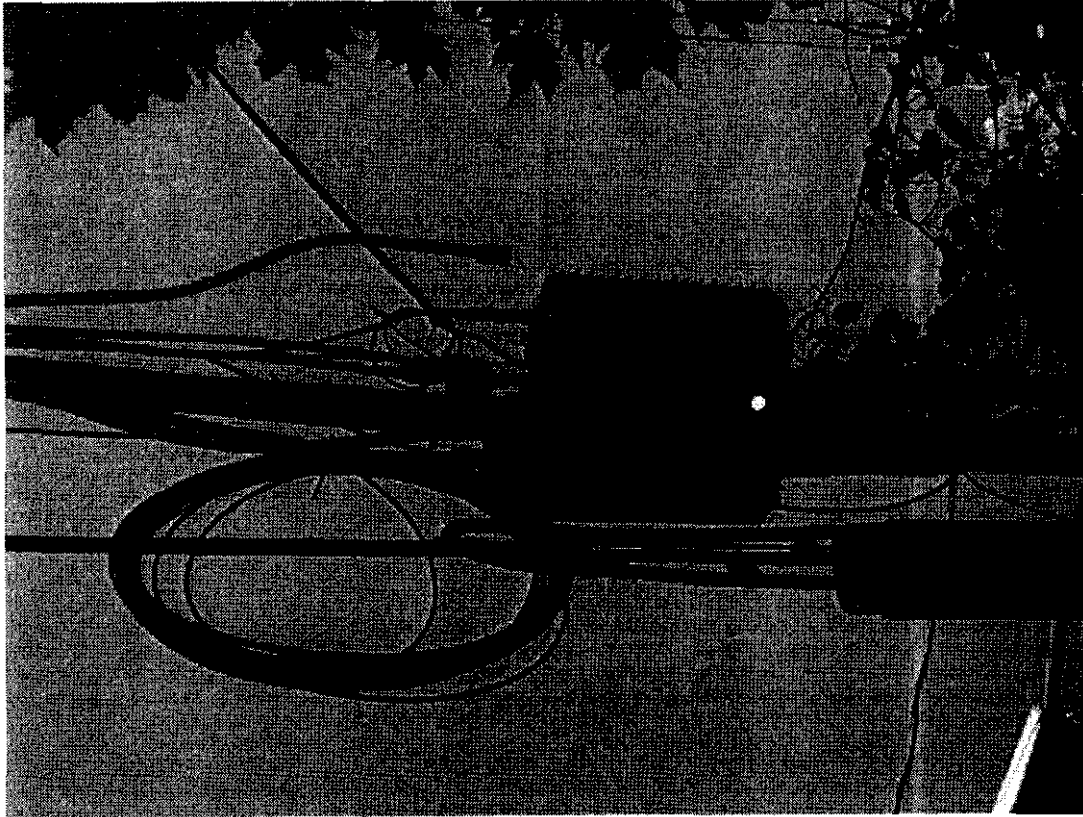
Construction of fiber to the neighborhood is accomplished in areas of aerial utility construction generally by hanging the fiber on existing cable plant, which is known as “overlashing.” Overlashing increases the weight of the cable attachment and creates larger cable bundles on the poles. In addition, aerial fiber optic plant has large cylindrical splice enclosures (Photograph 1) and spare fiber attached in snowshoes or hanging in loops³ (Photograph 2).

Photograph 1



³ A significant **safety hazard** is created **by hanging spare fiber in loops.**

Photograph 2



2.1.3 Underground Construction

In areas of underground construction, the cable company must create trenches in the ROW or use directional boring. Roads, sidewalks, and lawns must be disrupted. Additional hand holes, pedestals, vaults, **and** cabinets must be constructed to place the nodes, cable and store slack cable and fiber splice enclosures (Photograph 3).

Photograph 3



Mistakes in the course of construction can disrupt utility service, leading to costly interruptions of service, property damage, or, in the worst case, injury or death to workers or citizens. Construction can also result in road closures, traffic delay, and the resulting needs for local government personnel to address these issues.

Once the work is completed, the company must undertake restoration of the ROW. The construction may leave damaged roads, sidewalks, and lawns unless there are adequate restoration practices. Even if a road is properly patched, the affected area will likely be degraded from its pre-cut condition, will be more susceptible to potholes, and will have a reduced lifetime. In the worst case, construction can create significant hazards to public safety.

2.1.4 Additional Coaxial Construction

In addition to the fiber construction, there may need to be additional coaxial cable construction in circumstances where an old stretch of coaxial cable is damaged. Some

older systems require replacement of all coaxial cable to be upgraded for advanced two-way services.

As with new fiber, additional coaxial cable in aerial utility areas is generally overlashed to the existing cable bundle. Even where the old cable is being replaced, industry practices are to overlash new cable and leave the old cable on the pole, in order to reduce costs and minimize interruption of service. In underground areas, trenching and directional boring may be necessary and are just as disruptive to the ROW as they are for installation of fiber optic cable.

2.1.5 Amplification

Advanced two-way services such as cable modem service also need higher capacity, which limits the maximum distance a coaxial cable can run without amplification. As a result, the cable company may need to make design changes and install additional amplifiers, known as “respacing.”

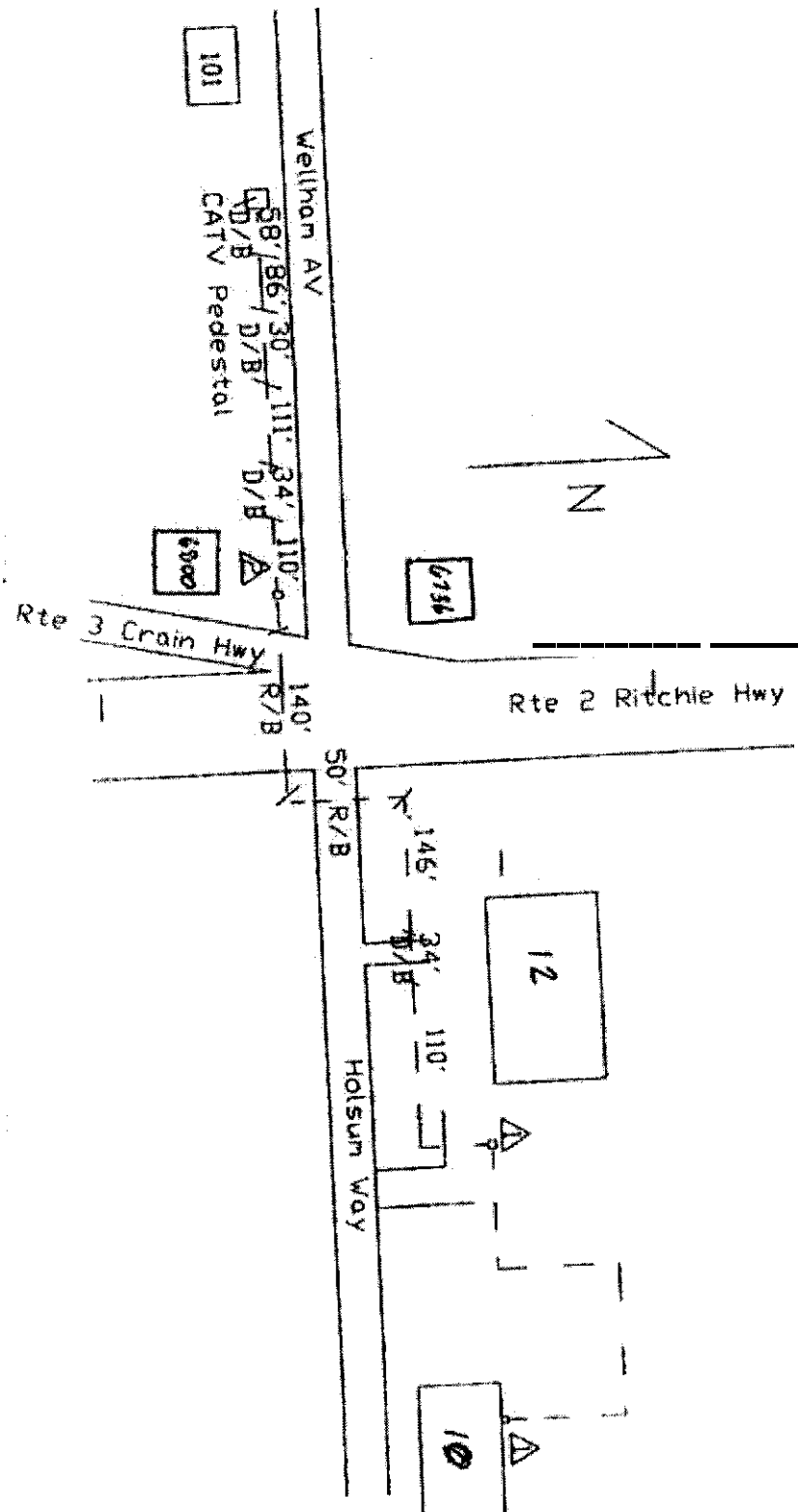
2.2 Virgin Construction to Business Areas

Where cable companies offer only video services, their systems generally serve primarily residential areas – on the assumption that most business customers are not willing to pay for a video-only service. In contrast, extensive fiber must be built out to business areas and buildings in order to offer cable modem services to businesses. This process entails burdening the public ROW in the same ways as discussed in Section 2.1.

For example, in Anne Arundel County, Maryland, Comcast is constructing cable in a number of commercial-only areas, presumably for advanced two-way services. This new construction is highly disruptive to the local community and burdensome to the ROW. In one example, the local government has noted the disruption caused by the ongoing construction across Maryland Routes 2 and 3, one of the busiest intersections in the state. Comcast’s construction is intended to enable it to provide commercial services over a dedicated coaxial link to a business near that location. This construction might not **take** place absent Comcast’s choice to provide cable modem services to a new group of customers — businesses located away from residential neighborhoods.

Figure 1 is the diagram of Comcast’s construction that was filed by Comcast as part of its permit request to the Anne Arundel County Department of Public Works. The diagram details the construction Comcast anticipated undertaking in order to provide cable modem services to the business at that intersection.

Figure 1



2.3 Construction of Redundant Routes

Cable companies are improving the reliability of their systems through redundant routing (construction of new, multiple paths of fiber to the neighborhood node facility), because cable modem services necessitate far greater reliability than video, and redundantly routed fiber can continue to operate in the event of damage. However, construction of redundantly routed fiber imposes the same impact on the public ROW as installation of fiber discussed in Section 2.1.

In addition, some redundant routes must be constructed in areas where cable plant does not yet exist. In those areas, aerial construction may require a new attachment to utility poles, which may disrupt the existing utilities or, where pole space is limited, require the attachment of unsightly attachment arms off the utility poles to maintain clearance from other utilities (Photograph 4). If underground construction is necessary, there will be trenching or directional boring, resulting in extensive impact on the ROW and requiring restoration, as discussed in Section 2.1.

Photograph 4



Cable companies will not be able to serve business customers if they provide unreliable Internet or telephony services. Similarly, cable companies will not be able to provide telephony services to residential customers unless they provide phone-company-level reliability. As a result, many cable systems offering telephone service have redundantly-routed their fiber optic cable.⁴ Depending on the density of the area, redundantly routing

⁴ Traditional phone service, for example, is generally considered 99.9 percent reliable, a level of reliability the cable industry has never tried to achieve technically for video-only services but that will be essential for telephony.

all fiber optics results in a 33 percent to 100 percent increase in the mileage of fiber optic plant. In addition, node equipment in the ROW must be equipped with dual sets of optical equipment, requiring use of additional modules within the node enclosure and additional power (Section 3.1). Within the hub, two sets of fibers may be dedicated to each node and two sets of fiber must be terminated for each node, doubling the space and resources for optics and fiber termination and increasing the size of the building or vault for the hub facility (Section 3.3).

In contrast, redundant routing is virtually nonexistent in video-only systems because cable video services have traditionally not required the levels of reliability consumers anticipate from telephone companies. Therefore, video-only systems require much less fiber optic cable and significantly fewer hub facilities than cable systems offering two-way advanced services such as cable modem service.

2.4 Replacement of Microwave Links

Fiber construction must replace microwave links between hubs, which were common on video-only cable systems, because microwave bandwidth is limited and cannot support high-speed two-way services and therefore cannot support cable modem services system wide. This new construction increases the burden on the public ROW in all the ways detailed in Section 2.1.